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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,352	11/14/2001	Miyuki Kunimatsu	HITA.0121	6939

7590

12/29/2003

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Falls Church, VA 22042-4503

EXAMINER
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HON, SOW FUN

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 12/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/987,352

Applicant(s)

KUNIMATSU ET AL.

Examiner

Sow-Fun Hon

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings were received on 09/30/03. These drawings are accepted. The objection is withdrawn.

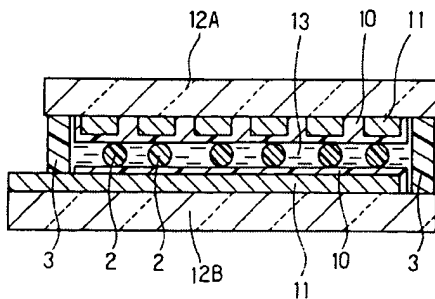
### ***Specification***

2. The objection to the abstract is withdrawn due to Applicant's amendment in Paper # 3 (filed 09/30/03).

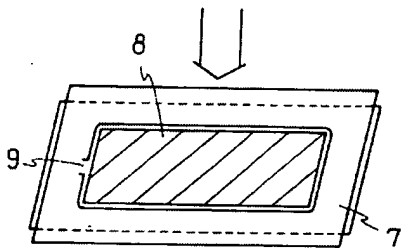
### ***Response to Arguments***

3. Applicant's arguments filed 09/30/03 have been fully considered but they are not persuasive.
4. Applicant argues that Yamada ('041 patent) fails to disclose an end sealing material, but rather only makes a passing reference to closing an opening in column 11, lines 11-20.

Applicant is respectfully apprised that Yamada not only refers to closing the opening 9 in column 11, lines 11-20, but also describes in detail that the liquid crystal injection port is sealed with an end-sealing material after a liquid crystal compound has been injected through the liquid crystal injection port (... then attaching the substrates 12A, 12B to each other with seal material 3, and sealing a liquid crystal 13 with the seal material 3.) (column 12, lines 10-20). See Fig. 5 on the next page.



The opening 9 in the cell 7 shown below, serves as an injection port through which the liquid crystal may be filled via injection or other means. The opening is then closed to complete the liquid display panel (column 11, lines 15-20). Liquid crystal 13 is taught to be sealed (in cell 7) with seal material 3. Thus seal material 3 is in all respects an end-seal material.



5. Applicant argues that the limitation of “the amount of constituent components of the end-sealing material which exist as impurities in the liquid crystal compound is 1.0/10,000 or less of the total peak area value of the liquid crystal compound that is measured by gas chromatography/mass spectrometry” is not present in either Yamada et al. or Morozumi.

Applicant is respectfully apprised that Yamada et al. teaches that the preferred components do not have interaction with the liquid crystal (column 10, lines 20-30, 45-50) and that discharge of the sealing material into the liquid crystal is prevented if the curing ratio of the sealing material after the ultraviolet curing is at least 50 to 60 % (column 5, lines 30-40) with an accumulated light quantity (irradiation energy) of 4,800 mJ/(cm<sup>2</sup>) (column 17, lines 15-30).

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Thus it is to be surmised that the amount of constituent components of the end-sealing material, which exist as impurities in the liquid crystal compound of 1.0/10,000 or less of the total peak area value of the liquid crystal compound that is measured by gas chromatography/mass spectrometry, is within the realm of the invention of Yamada et al.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (703)308-3265 or (571)272-1492 after December 29, 2003.. The examiner can normally be reached Monday to Friday from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (703)308-4251 or (571)272-1498 after December 29,

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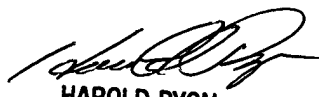
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2003. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9311.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

SH  
Sow-Fun Hon  
12/23/03

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1772 12/23/03